

ABSTRACT

A radio frequency power amplifier characterized by an efficiency and operative to produce an output signal at a desired output power includes an outphasing system with shunt reactance and a controller. The outphasing
5 system with shunt reactance has a variable phase and is operative to produce the output signal from an input signal. The controller is operative to control the variable phase and the amplitude of the input signal in order to achieve high efficiency at low desired output powers. A method for controlling the output power of a radio frequency power amplifier includes reducing the power of an
10 input signal to the power amplifier when a desired output power is below a threshold and performing outphasing when the desired output power is not below the threshold.